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DEPARTMENT OF NATIONAL
HEALTH AND WELFARE
OTTAWA

Canada

THE ECONOMICS AND COSTS OF HEALTH CARE

, 1967

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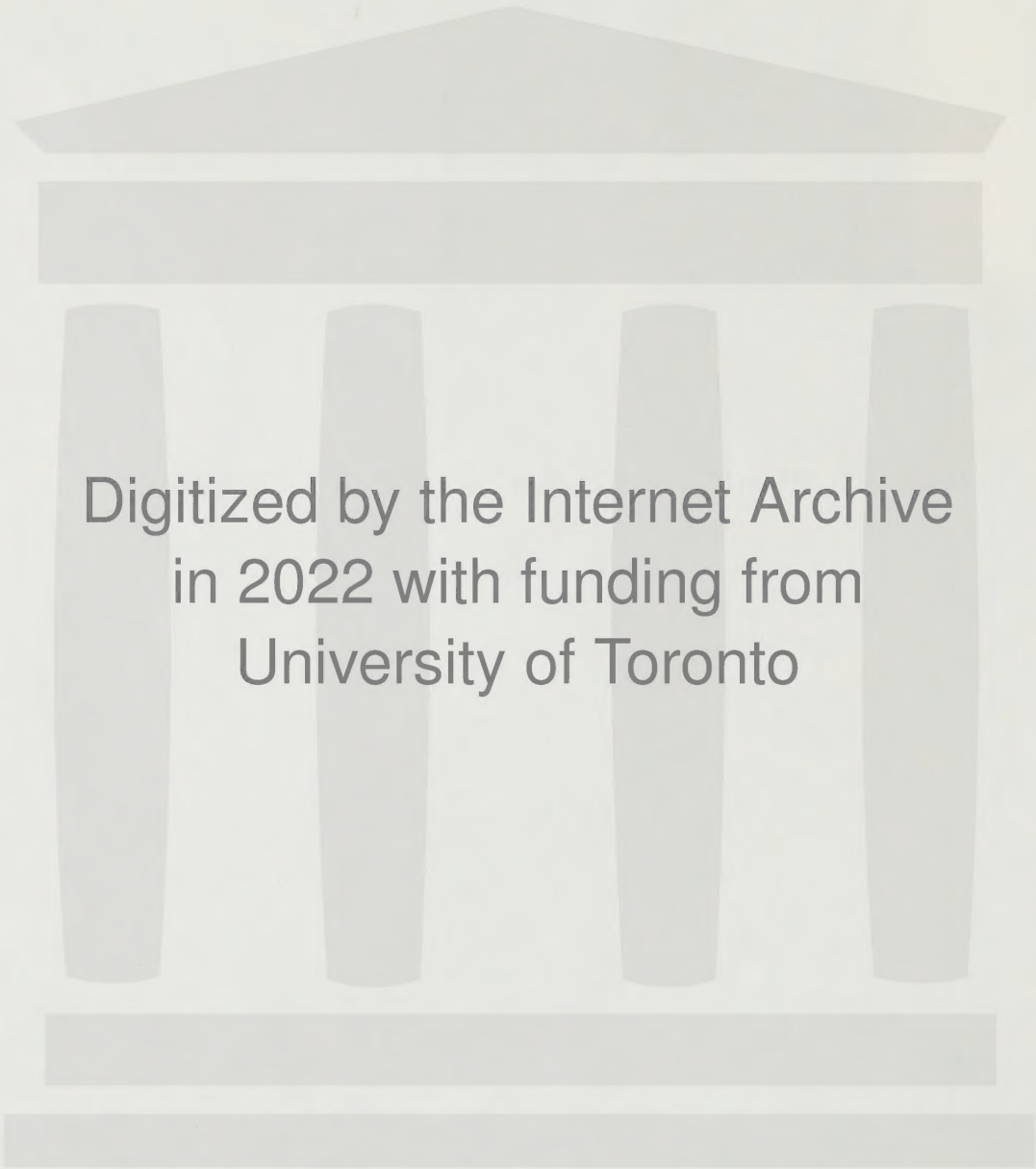

FOREWORD

Since 1961 I have lectured each year to University of Toronto students in public health and hospital administration on what is loosely termed "medical economics" with specific emphasis on the costs of health care in Canada. Members of our research staff have over the years compiled a series of tables for use in connection with these lectures which have received limited distribution beyond the classroom to people who have expressed an interest in them. With the thought that these tables contain material that may be useful to a somewhat larger audience interested in health economics questions, we have decided to release my lecture as a Research and Statistics "Memo" to make it generally available.

John E. Osborne

John E. Osborne, Director,
Research and Statistics.

THE ECONOMICS AND COSTS OF HEALTH CARE IN CANADA

Economics is the social science that analyzes the allocation of scarce resources to meet the demands of the people in a country or region for goods and services. Health care economics is concerned with the allocation of health care resources -- professional services and health facilities -- to meet the demands of people for health services and supplies. The aggregate demand of the people in a country for health care services and supplies can be measured by the total amount of expenditures they have allocated, either directly or through decisions of their governments, to purchase health services and supplies in a given period of time.

In dealing with the economics of health care in Canada, this paper concentrates on three parts of this broad subject. The first section measures aggregate demand by examining the trends in health care expenditures, in total and on particular types of service, by governments and by consumers, over varying periods of time. The second section analyzes the supply and distribution of the two major health resources in Canada -- hospitals and physicians -- and the impact on trends in total expenditures of costs per unit for these two items in recent years. The third section examines some of the programs that have been established in Canada to improve the allocation of our health resources to meet the demands of our people for health care services.

HEALTH CARE EXPENDITURES

Expenditures by Governments

To put this subject in its proper perspective, the figures in Table 1 show the total amount of money that has been spent on health, and on health and social welfare combined, by all three levels of government in Canada over a period of years.

Whereas in 1913 about $15 million was spent on health and social welfare, the 1930 figure was ten times as large and the 1937 figure twenty times as large at over $300 million. In the postwar years these expenditures rose from about $800 million in 1947 to $2 billion in 1956 and to $4.7 billion in 1965. In considering these figures, it should be noted that the family allowance program was introduced in 1945, the old age security program in 1952 and the hospital insurance program in 1958, accounting for substantial increases in expenditures in each of these years. In the second column, expenditures by the three levels of government on health are shown by themselves -- i.e. excluding social welfare expenditures. Expenditures rose from $50 million in 1937 to $250 million in 1949, to $530 million in 1957, and to $1,670 million in 1965.

TABLE 1

HEALTH AND SOCIAL WELFARE EXPENDITURES BY ALL LEVELS OF GOVERNMENT, SELECTED YEARS, CANADA

Fiscal Year	Amounts of Expenditures on	
	Health and Social Welfare	Health only
	$ millions	$ millions
1913-14	15.2	N.A.
1930-31	156.8	N.A.
1937-38	309.6	50.2(a)
1943-44	259.1	69.9
1947-48	793.5	167.2
1949-50	1,061.1	252.9
1951-52	1,230.2	306.1
1953-54	1,673.7	374.0
1954-55	1,871.3	421.8
1955-56	1,907.3	438.6
1956-57	2,003.5	469.9
1957-58	2,439.8	530.9
1958-59	2,821.8	623.5
1959-60	3,028.5	818.9
1960-61	3,356.6	933.8
1961-62	3,682.9	1,125.7
1962-63	3,887.5	1,247.2
1963-64	4,056.3	1,333.8
1964-65(b)	4,453.5	1,551.7
1965-66(b)	4,694.0	1,674.3

(a) Federal expenditures on after care for veterans were estimated on a pro-rata basis using the figures shown for the Department of Veterans Affairs for the fiscal year 1938-39.

(b) Estimated or preliminary, except for federal programs.

Source: Research and Statistics Directorate, Department of National Health and Welfare.

At first glance these figures appear to indicate substantial increases in the amount of money governments are spending on health and social welfare. Health and social welfare expenditures have almost doubled and health expenditures alone have tripled since 1957. However, since the war there has been a substantial increase in the Canadian population -- from 12 million persons in 1945 to over 20 million people at present. It is only natural therefore that the cost of providing health care and social welfare to this population has increased. For this reason, Table 2 shows the per capita expenditures on these items.

In the postwar period per capita expenditures on health and social welfare have risen from $63 in 1947 to $238 in 1965. Per capita expenditures on health alone rose from $13 in 1947 to $85 in 1965. Although not as large proportionately as the increases in total expenditures, these increases in per capita expenditures are still very substantial. We should, therefore, take into account the fact that price levels and productivity in the postwar period have also been expanding rapidly.

One method of analyzing such increases would be to express the expenditures in terms of constant dollars -- say on the basis of the price level that prevailed in 1949. On this basis, health and welfare expenditures per capita would be found to have increased from $79 in 1949 to $97 in 1953, $131 in 1958, and $172 in 1965, all expressed in terms of 1949 dollars. Health expenditures would have risen from $19 per capita in 1949 to $22 in 1953, $29 in 1958 and $61 in 1965 -- again expressed in constant 1949 dollars. However, this method does not take into account the increases in productivity that have taken place.

Another method of analysis which accounts for increases in both price level and productivity, is to relate these expenditures to national income. Several measures of national income are available, but the one most frequently used is the Gross National Product, (1) representing the dollar value (in current dollars) of all goods and services produced in the country during any given year.

In Table 3, government expenditures on health and social welfare are related to the Gross National Product in each year. In the postwar period there has been a very gradual increase in the percentage of G.N.P. that has been spent by governments on health and social welfare -- from 5.9 per cent in 1947 to 9.6 per cent in 1961 and then back to 8.8 per cent in 1965. Similarly, government expenditures on health have increased from 1.2 per cent of G.N.P. in 1947 to 3.1 per cent in 1965.

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(1) The G.N.P. represents the market value of all production, including: wages and salaries; rents, interests and dividends; profits; depreciation costs and indirect taxes that have entered into the costs of production.

TABLE 2

PER CAPITA HEALTH AND SOCIAL WELFARE EXPENDITURES BY ALL LEVELS OF GOVERNMENT, SELECTED YEARS, CANADA

Fiscal Year	Per Capita[a] Expenditures on	
	Health and Social Welfare	Health only
	$	$
1913-14	2.00	-
1930-31	15.36	-
1937-38	28.03	4.55
1943-44	21.97	5.93
1947-48	63.22	13.32
1949-50	78.91	18.81
1951-52	86.86	21.61
1953-54	111.57	24.93
1954-55	121.17	27.31
1955-56	120.46	27.70
1956-57	123.41	28.94
1957-58	145.14	31.58
1958-59	163.82	36.20
1959-60	171.84	46.47
1960-61	186.38	51.85
1961-62	200.63	61.32
1962-63	208.08	66.76
1963-64	213.35	70.16
1964-65(b)	230.02	80.15
1965-66(b)	238.21	84.97

(a) Population as at June 1 within fiscal year for 1913-14 to 1949-50 inclusive and as at October 1 for 1951-52 to date.

(b) Estimated or preliminary, except for federal programs.

Source: Research and Statistics Directorate, Department of National Health and Welfare.

TABLE 3

HEALTH AND SOCIAL WELFARE EXPENDITURES BY ALL LEVELS OF GOVERNMENT AS PERCENTAGE OF GROSS NATIONAL PRODUCT, SELECTED YEARS, CANADA

Fiscal Year	Percentage of G.N.P.(a) Spent on	
	Health and Social Welfare	Health only
	%	%
1913-14	-	-
1930-31	2.8	-
1937-38	5.8	0.9
1943-44	2.3	0.6
1947-48	5.9	1.2
1949-50	6.4	1.5
1951-52	5.6	1.4
1953-54	6.7	1.5
1954-55	7.4	1.7
1955-56	6.9	1.6
1956-57	6.5	1.5
1957-58	7.8	1.7
1958-59	8.4	1.9
1959-60	8.5	2.3
1960-61	9.2	2.6
1961-62	9.6	2.9
1962-63	9.5	3.0
1963-64	9.1	3.0
1964-65(b)	9.2	3.2
1965-66(b)	8.8	3.1

(a) G.N.P. data are on a calendar year basis prior to 1947-48 and on a fiscal year basis from 1947-48 to 1965-66. They are subject to revision from 1962-63 on.

(b) Estimated or preliminary, except for federal programs.

Source: Research and Statistics Directorate, Department of National Health and Welfare.

During this period there have been fluctuations up and down in this percentage, with larger increases in some years and small decreases in other years. This is to be largely accounted for by a series of recessions which have taken place during this period, as a result of which the G. N. P. increased only slightly in some years and in 1954 actually decreased. There were substantial increases in G. N. P. in 1955, 1956, 1962, 1963 and 1965 but in others years the increases were very modest.

Any country has to decide what percentage of the G. N. P. it is prepared to devote to health and social welfare expenditures. As a nation's income grows, we would expect health and welfare expenditures to increase. But these needs must compete with many other national needs; money must also be made available for education, roads, resource development, national defence, foreign aid, and so on. Should health and welfare expenditures expand faster than national income, or should they only keep pace with the general growth in the economy? In Table 4, are shown the comparative positions of Canada with relation to the other English-speaking countries.

Canada is behind New Zealand and Britain but is ahead of Australia and the United States in terms of the percentage of G. N. P. devoted to government health expenditures. Similarly, Canada is behind New Zealand and Britain in health and social welfare combined, but is ahead of Australia and the United States. It should be pointed out, however, that these countries have different per capita levels of income. In a country with a larger per capita income, there is probably less need for income maintenance and health insurance programs, since the population has more money to spend privately on health and welfare services. Despite the fact that the British government spends $2\frac{1}{2}$ times as much of Britain's national income on health as does the United States government, nonetheless the supply of hospital beds, physicians and other health personnel is proportionately greater in the United States. This situation is a direct function of the larger levels of income prevailing in the United States. As will be noted later, the United States as a whole spends a higher amount of its national income on personal health care services, than does Britain.

Personal Health Care Expenditures

So far this paper has dealt only with government expenditures in the field of health care. The amounts spent by governments by no means comprise the total expenditures within a nation on health care services. In analyzing the whole field of health care expenditures, it is useful to distinguish between personal health care expenditures, such as payments for hospital, medical and dental services, and public health services expenditures, such as community health services, immunization programs and preventive health clinics.

TABLE 4

HEALTH AND SOCIAL WELFARE EXPENDITURES BY ALL LEVELS OF GOVERNMENT AS PERCENTAGE OF GROSS NATIONAL PRODUCT IN SELECTED COUNTRIES, RECENT YEARS

Country		Expenditures as Percentage of G.N.P.	
		Health	Health and Social Welfare
		%	%
United States	1958-59	1.2	6.3
	1959-60	1.3	6.3
	1960-61	1.4	7.0
	1961-62	1.4	7.0
	1962-63	1.4	7.0
	1963-64	1.5	6.9
	1964-65	1.5	6.9
Australia	1958-59	2.3	7.5
	1959-60	2.3	7.4
	1960-61	2.4	7.7
	1961-62	2.6	8.3
	1962-63	2.6	8.0
	1963-64	2.5	7.9
	1964-65	2.5	7.6
Canada	1958-59	1.9	8.4
	1959-60	2.3	8.5
	1960-61	2.6	9.2
	1961-62	2.9	9.6
	1962-63	3.0	9.5
	1963-64	3.0	9.1
	1964-65	3.2	9.2
	1965-66	3.1	8.8
United Kingdom	1958-59	3.2	9.8
	1959-60	3.3	9.9
	1960-61	3.5	10.0
	1961-62	3.4	10.1
	1962-63	3.4	10.3
	1963-64	3.5	10.9
	1964-65	3.6	10.7
New Zealand	1958-59	3.6	11.2
	1959-60	3.6	12.4
	1960-61	3.6	12.4
	1961-62	3.8	12.4
	1962-63	3.8	11.9
	1963-64	3.7	11.5
	1964-65	3.5	10.8

Source: Research and Statistics Directorate,
Department of National Health and Welfare.

Total expenditures on personal health care services as shown in Table 5 rose from $735 million in 1953 to an estimated $2,440 million in 1965, an increase of over 230 per cent in 12 years. Included in these figures were expenditures on hospital services of all kinds, on physicians' services, on prescribed drugs, on dentists' services and on the services of other health personnel. Expenditures on physicians' services and drugs each increased by almost 210 per cent over this 12-year period, and expenditures on public hospital services increased by about 300 per cent. In 1965, it is estimated that over $1,125 million was spent for active treatment hospital services, over $545 million for physicians' services and almost $150 million for prescribed drugs.

Eliminating the effect of population growth by expressing these expenditures in per capita terms, Table 6 shows that personal health care expenditures rose from $50 to $125 per person in the period under consideration. At the same time active treatment hospital care expenditures rose from $19 to $58 per capita and physicians' services rose from $12 to $28 per capita.

When expressed as percentages of G.N.P., the increases are not quite so impressive. Only the two larger items are used for this purpose in Table 7. Expenditures on active treatment hospital services amounted to 1.15 per cent of G.N.P. in 1953 and to 2.17 per cent of G.N.P. in 1965. In the same period the proportion of G.N.P. spent on physicians' services rose from 0.7 per cent to just over 1 per cent. Taken together these expenditures amounted to 3.2 per cent of G.N.P. in 1965. Therefore, although a larger portion of our national income has been devoted to hospital and medical services in the past ten years, these increases are not nearly as spectacular as might first appear from an examination of the total sums of money involved.

To put this situation in perspective, Table 8 shows the comparative situation in Canada and four other countries. Total expenditures on personal health care in Canada increased from about 2 3/4 per cent of G.N.P. in 1953 to 4.4 per cent in 1965. In the United States a somewhat similar increase is noted -- from 2 2/3 per cent in 1953 to 4 per cent in 1965. In Britain, New Zealand and Norway on the other hand, personal health care expenditures remained remarkably stable from 1953 to 1961, rising by less than one-half of one per cent. New Zealand spent about the same percentage of G.N.P. on health care in 1961 as did the United States (about 3.8 per cent), whereas Britain and Norway each spent under 3 1/4 per cent. United States expenditures have risen by about 0.9 per cent in the last ten years, whereas Canadian expenditures have increased by 1.4 per cent of G.N.P. It should be noted that expenditures on the U.S. Medicare Plan, which began in 1966, are not reflected in these figures.

TABLE 5

EXPENDITURES ON PERSONAL HEALTH CARE [a], CANADA, 1953-1965

Year	Hospital Services					Physicians' Services	Prescribed Drugs(f, g)	Dentists' Services	Other (g, h)	Total(e)
	Active Treatment(b)	Mental(c)	Tuber-culosis(c)	Federal(d)	All Hospitals(e)					
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
1953	280.4	57.8	29.4	36.4	404.0	176.6	48.8	60.5	45.0	734.9
1954	314.0	64.5	30.4	37.9	446.8	188.6	52.1	66.4	50.0	803.9
1955	342.4	68.9	29.9	38.8	480.1	206.5	59.5	68.6	55.0	869.7
1956	380.8	77.6	30.6	40.8	529.9	240.1	71.8	81.5	65.0	988.3
1957	422.9	87.5	31.0	45.3	586.8	271.8	84.5	87.3	70.0	1,100.4
1958	462.3	99.0	30.4	48.4	640.1	301.3	90.3	98.1	85.0	1,214.8
1959	542.6	111.6	29.6	50.3	734.1	325.7	106.5	100.1	95.0	1,361.4
1960	625.2	120.2	30.1	53.9	829.4	355.0	107.3	112.4	105.0	1,509.1
1961	713.4	134.9	29.9	56.8	935.0	388.3	112.8	118.8	115.0	1,669.9
1962	802.9	144.4	29.1	60.1	1,036.5	406.1	114.6	123.8	125.0	1,806.0
1963	900.1	163.0	28.1	62.9	1,154.1	453.4	128.0	134.8	135.0	2,005.3
1964	1,003.7	182.1	25.9	65.4	1,277.1	495.7	137.6	152.0	145.0	2,207.4
1965(g)	1,125.9	210.7	25.9	69.6	1,432.1	545.1	149.1	160.1	155.0	2,441.4

(a) Excluding expenditures on public health and for capital purposes.
(b) Including gross expenditures of public and private acute, chronic, and convalescent hospitals in 1953-1957 and, in non-participating provinces, in 1958-1960; including gross expenditures of budget review and contract hospitals in 1961-1965 and, in participating provinces, in 1958-1960; excluding expenditures of mental, tuberculosis, and federal hospitals.
(c) Including gross expenditures of public and private hospitals; excluding expenditures of federal hospitals.
(d) Including acute, chronic, convalescent, mental, and tuberculosis hospitals of the Department of National Health and Welfare and the Department of Veterans Affairs; excluding hospitals of the Department of National Defence.
(e) Items may not add to totals because of rounding.
(f) Sold by retail drug stores only.
(g) Estimated.
(h) Including expenditures for services of private duty nurses, and chiropractors, osteopaths, and optometrists; excluding all employees of hospitals.

Source: "Expenditures on Personal Health Care in Canada 1953-1961", (Health Care Series No. 16, Research and Statistics Division), and unpublished data.

TABLE 6

PER CAPITA EXPENDITURES ON PERSONAL HEALTH CARE[a], CANADA, 1953-1965

Year	Hospital Services					Physicians' Services	Prescribed Drugs(f, g)	Dentists' Services	Other (g, h)	Total(e)
	Active Treatment(b)	Mental(c)	Tuber-culosis(c)	Federal(d)	All Hospitals(e)					
	$	$	$	$	$	$	$	$	$	$
1953	18.89	3.89	1.98	2.45	27.21	11.90	3.29	4.08	3.03	49.50
1954	20.54	4.22	1.99	2.48	29.23	12.34	3.41	4.34	3.27	52.59
1955	21.81	4.39	1.90	2.47	30.58	13.15	3.79	4.37	3.50	55.40
1956	23.68	4.83	1.90	2.54	32.95	14.93	4.46	5.07	4.04	61.46
1957	25.46	5.27	1.87	2.73	35.33	16.36	5.09	5.26	4.21	66.25
1958	27.07	5.80	1.78	2.83	37.48	17.64	5.29	5.74	4.98	71.12
1959	31.04	6.38	1.69	2.88	41.99	18.63	6.09	5.73	5.43	77.87
1960	34.99	6.73	1.68	3.02	46.41	19.87	6.00	6.29	5.88	84.45
1961	39.12	7.40	1.64	3.11	51.27	21.29	6.18	6.51	6.31	91.56
1962	42.24	7.78	1.57	3.24	55.82	21.87	6.17	6.67	6.73	97.25
1963	47.63	8.63	1.49	3.33	61.08	23.99	6.77	7.13	7.14	106.12
1964	52.18	9.47	1.35	3.40	66.39	25.77	7.15	7.40	7.54	114.76
1965(p)	57.53	10.77	1.32	3.56	73.17	27.85	7.62	8.18	7.92	124.75

(a) Excluding expenditures on public health and for capital purposes.
(b) Including gross expenditures of public and private acute, chronic, and convalescent hospitals in 1953-1957 and, in non-participating provinces, in 1958-1960; including gross expenditures of budget review and contract hospitals in 1961-1965 and, in participating provinces, in 1958-1960; excluding expenditures of mental, tuberculosis, and federal hospitals.
(c) Including gross expenditures of public and private hospitals; excluding expenditures of federal hospitals.
(d) Including acute, chronic, convalescent, mental and tuberculosis hospitals of the Department of National Health and Welfare and the Department of Veterans Affairs; excluding hospitals of the Department of National Defence.
(e) Items may not add to totals because of rounding.
(f) Sold by retail drug stores only.
(g) Estimated.
(h) Including expenditures for services of private duty nurses, and chiropractors, osteopaths, optometrists; excluding all employees of hospitals.

Source: "Expenditures on Personal Health Care in Canada 1953-1961", (Health Care Series No. 16, Research and Statistics Division) and unpublished data.

TABLE 7

PERCENTAGE OF GROSS NATIONAL PRODUCT SPENT ON HOSPITAL SERVICES AND PHYSICIANS' SERVICES, CANADA, 1953 TO 1965

Year	Percentage of Gross National Product spent on	
	Active Treatment Hospital Services	Physicians' Services
	%	%
1953	1.15	0.72
1954	1.26	0.76
1955	1.26	0.76
1956	1.25	0.79
1957	1.33	0.85
1958	1.41	0.92
1959	1.55	0.93
1960	1.72	0.98
1961	1.90	1.04
1962	1.98	1.00
1963	2.07	1.04
1964	2.12	1.05
1965	2.17(a)	1.05(a)

(a) Preliminary

Sources: Expenditure data from Research and Statistics Directorate, D.N.H. & W.; Gross National Product from D.B.S. "National Accounts - Income and Expenditure".

TABLE 8

PERSONAL HEALTH CARE EXPENDITURES[a] AS PERCENTAGES OF GROSS NATIONAL PRODUCT AT MARKET PRICES, CANADA, UNITED STATES, NEW ZEALAND, UNITED KINGDOM, AND NORWAY, YEARS 1953 TO 1965

Year	Canada	U.S.	N.Z.	U.K.	Norway
	%	%	%	%	%
1953	2.76	2.65	3.35	2.78	2.73
1954	3.03	3.15	3.24	2.77	2.69
1955	3.01	3.13	3.32	2.84	2.69
1956	3.02	3.27	3.48	2.86	2.64
1957	3.23	3.36	3.51	2.90	2.83
1958	3.43	3.62	3.57	2.98	2.98
1959	3.62	3.60	3.60	3.07	3.15
1960	3.87	3.63	3.63	3.16(b)	3.17
1961	4.15	3.73	3.81	3.08	3.16
1962	4.15	3.74	(c)	3.09	(c)
1963	4.34	3.82	(c)	3.14	(c)
1964	4.39	3.99	(c)	3.18	(c)
1965	4.42	4.03	(c)	3.32(d)	(c)

(a) Including expenditures on Hospital Services, Physicians' Services, Prescribed Drugs, and Dentists' Services, excluding expenditures on "other" types of personal health services.
(b) Percentage inflated slightly by the arrears of an award to medical practitioners for increased remuneration for previous years.
(c) Not available.
(d) Provisional.

Source: D.N.H.&W., "Health Services, Health Insurance, and their Inter-Relationship" Chapter XX, and later information compiled by Research and Statistics Directorate, D.N.H.&W., March 1967.

In this examination of personal health care expenditures, no distinction has yet been made between expenditures by individual consumers and by governments or other agents on their behalf. A considerable proportion of the expenditure shown in Table 1, spent by all levels of government, was also included in the figures in Table 5 -- expenditures for personal health care. For this reason Table 9 has been included to show the sources of personal health care expenditures for the two major items -- physicians' services and active treatment hospital care.

From this table it can be seen that, whereas 31 per cent of the expenditure for physicians' services in 1965 came from self-paying patients, only about 6 per cent of the expenditures on active treatment hospital care in 1964 came from this source. In each case these figures represent a decline since 1953, a drop of 30 per cent for physicians' services, and of 28 per cent for hospital care. The proportion of the total provided by voluntary prepayment plans increased from 24 to 56 per cent for physicians' services, but fell from 22 to $2\frac{1}{2}$ per cent for hospital care. A much larger percentage of the total expenditure was provided by governments and Workmen's Compensation Boards for hospital care than for physicians' services. Public expenditures for active treatment hospital care rose from 36 per cent of the total in 1953 to 87 per cent in 1964. Public expenditures on physicians' services decreased slightly from 15 per cent of the total in 1953 to 13 per cent in 1965, largely due to the growth of the voluntary prepayment plans in this period. It should be noted that the figures in this table for hospital care represent expenditure before and after the National Hospital Insurance Plan came into operation in all provinces.

Public Health Services Expenditures

Expenditures on public health services are difficult to measure accurately, owing to the variations in the definition of what constitutes public health services, and to the lack of differentiated data on municipal health care expenditures. Table 10 shows estimated federal and provincial expenditures on public health services, excluding any public expenditure on hospital and medical care services.

Federal expenditures include health grants to the provinces, consulting and advisory services, examination services, inspection and enforcement of public health measures and miscellaneous grants and administrative costs. Provincial figures include general health and public health expenditures, but exclude provincial expenditures on mental and tuberculosis hospitals, which rose from $83 million in 1956 to $171 million in 1964. In this table, no municipal expenditures have been included since the proportion of municipal expenditures during this

TABLE 9

PERCENTAGE DISTRIBUTION OF PERSONAL HEALTH CARE EXPENDITURES FOR PHYSICIANS' SERVICES, 1953 AND 1965, AND ACTIVE TREATMENT HOSPITAL (a) CARE, 1953 AND 1964, BY SOURCE OF FUNDS

Source of Funds	Percentage Distribution of Expenditures			
	Physicians' Services		Active Treatment Hospital Care (a)	
	1953	1965	1953	1964(b)
	%	%	%	%
Private Sector:				
Self-paying patients	61.2	31.3	34.1	6.4
Voluntary prepayment plans	24.1	55.5	22.4	2.5
Other (c)	-	-	7.3	4.4
Public Sector:				
Governments (d)	7.9	8.6	33.8	85.3
Workmen's Compensation Boards	6.9	4.6	2.5	1.4
Total	100.0	100.0	100.0	100.0

(a) Excluding mental, tuberculosis and federal institutions.
(b) Estimated.
(c) Donations, investment income, deficits, etc.
(d) Excludes Alberta Medical Plan.

Source: Research and Statistics Directorate, Department of National Health and Welfare.

TABLE 10

ESTIMATED FEDERAL AND PROVINCIAL EXPENDITURES ON PUBLIC HEALTH SERVICES (EXCLUDING HOSPITAL AND MEDICAL CARE SERVICES), FISCAL YEARS 1956-57 TO 1965-66

Fiscal Year	Federal[a] Expenditures	Provincial[b] Expenditures	Total[c] Expenditures
	$ million	$ million	$ million
1956-57	44.7	23.5	68.2
1957-58	45.1	27.1	72.2
1958-59	53.2	31.0	84.2
1959-60	54.4	31.9	86.3
1960-61	57.4	40.1	97.5
1961-62	60.7	42.6	103.3
1962-63	64.7	45.1	109.8
1963-64	70.7	66.7(d)	137.4
1964-65	77.0	60.0(e)	137.0
1965-66(f)	72.0	70.0(e)	142.0

(a) Including health grants to the provinces for the extension of health services, which rose from $33.5 million in 1955-56 to $56.7 million in 1964-65 but totalled $45.5 million in 1965-66 due to the Province of Quebec opting out of this program, with the exception of research grants.

(b) Not including provincial expenditures on T.B. and Mental Hospitals which rose from $83.1 million in 1956 to $170.6 million in 1964, the most recent year for which data are available.

(c) These figures do not include any municipal expenditures. The portion of the $50 to $80 million annual health expenditures of municipalities during this period that was spent on public health services is not available.

(d) Increase from previous year due to substantial grants by the Province of Quebec for the construction of public health buildings other than hospitals.

(e) Estimate.

(f) Effective April 1, 1965, Quebec opted out of the General Health Grants program (with the exception of research grants) and received federal payments of $7.5 million in tax abatements. This amount is excluded from the federal data but is included in the provincial expenditures.

period which was spent on public health services, as distinct from personal health services, is not available. All that can be said is that in 1953 and 1963 municipalities spent about $50 million to $55 million, and in 1957 about $80 million, on health items.

With these limitations in mind, it can be noted from Table 10 that federal and provincial expenditures on public health services rose from $68 million to an estimated $142 million between 1956 and 1965. About 51 per cent of these amounts were federal expenditures, largely health grants to the provinces.

Total Health Care Expenditures

From the foregoing it can be seen that personal health care expenditures in 1965 amounted to $2.44 billion and federal and provincial public health expenditures to $142 million, with an unknown additional sum spent on public health by municipalities. A rough estimate, therefore, of total health care expenditures in Canada in 1965 would be about $2,600 million, or 5 per cent of G.N.P., excluding any capital expenditure. Hospital capital expenditures in 1965 are estimated at about $220 million.

HEALTH CARE RESOURCES

An economic analysis of health care must take into account the supply and distribution of health personnel -- doctors, dentists and nurses -- that are available, and of health facilities, particularly the number of hospital beds. Trends in the costs of maintaining these resources will have an important impact on trends in total health care expenditures, and the number of health personnel and health facilities must be kept in mind when analyzing projections of future health care expenditures. In this paper there is opportunity to discuss only the rates of growth in hospital facilities and the supply of physicians.

Hospitals

The supply of acute treatment beds in Canada increased from about 60,000 to over 100,000 in the period 1948 to 1964, as Table 11 shows. As would be expected, Ontario with over 34,000 beds in 1964 had the largest supply of hospital facilities, closely followed by Quebec with almost 27,000. Because of the variations in provincial populations, it is more meaningful to examine the number of beds per thousand population. The same table shows that the total supply of acute treatment beds in Canada rose from 4.6 to 5.3 per thousand population in the sixteen years since 1948 -- not a very startling increase despite all the new construction that has taken place under the impetus of the National

TABLE 11

ESTIMATED ACUTE TREATMENT HOSPITAL BEDS SET UP[a], TOTAL AND PER THOUSAND POPULATION, BY PROVINCE, 1948 AND 1964

Province	Total		Per Thousand Population	
	1948	1964	1948	1964
Newfoundland	1,402	2,344	4.1	4.8
Prince Edward Island	468	577	5.0	5.4
Nova Scotia	2,588	3,999	4.1	5.3
New Brunswick	2,338	3,517	4.7	5.7
Quebec	13,828	26,622	3.7	4.8
Ontario	18,302	34,375	4.3	5.2
Manitoba	3,424	5,145	4.6	5.4
Saskatchewan	5,752	7,128	6.9	7.6
Alberta	5,637	8,417	6.6	5.9
British Columbia	6,056	9,258	5.6	5.3
Yukon & N.W.T.	282	571	11.7	13.9
Canada	60,077	101,953	4.6	5.3

(a) Includes public and private hospitals; excludes chronic and convalescent beds, tuberculosis units, federal hospitals and bassinets. However, in the Territories federal hospitals are included.

Sources: "Hospital Care in Canada; Trends and Development 1948-1962", Research and Statistics Division, D.N.H. & W., Ottawa, September, 1964, Appendix Table A19; "Annual Report of the Minister of National Health and Welfare under the Hospital Insurance and Diagnostic Services Act, 1965-66", Appendix Tables A12 and A13.

Health Grants. The largest relative increase in the supply of beds took place in Quebec where the ratio rose from 3.7 to 4.8 beds per thousand population. Nova Scotia took second place with an increase from 4.1 to 5.3 beds per thousand. Saskatchewan has by far the largest proportionate supply of hospital beds in the country, amounting to 7.6 beds per thousand in 1964, reflecting the different pattern of hospital utilization experienced by its scattered, predominantly rural population.

The supply of beds in chronic and convalescent hospitals has also increased since 1948 as shown in Table 12. In 1964 there were over 19,000 such beds available, or one bed per thousand population; Alberta, Ontario, Manitoba, and Quebec have proportionately the largest number of such facilities at 1.8, 1.3, 1.1 and 1.0 beds per thousand in 1964. The supply of these long-term care beds has risen spectacularly in Alberta in the last few years as a result of that province's construction program. Many provinces still rely on their acute treatment hospitals to provide the bulk of this kind of care.

It was shown in Table 5 that total expenditures on active treatment hospital care rose from $280 million to $1,126 million between 1953 and 1965. Allowing for the population increase, it was found that these sums amounted to $18.89 in 1953 and to $57.53 per capita in 1965 -- an increase of over 200 per cent. What are the factors that have brought about this substantial increase in the per capita costs of operating hospitals? One factor revealed in Tables 11 and 12 was that the supply of beds had increased considerably between 1948 and 1964: in this 16-year period the supply of beds rose from 5.1 to 6.3 per thousand population. With this increase in the number of beds available, it can be assumed that more people are going to hospital now than in 1948 or 1953.

From Table 13 it can be seen that the number of admissions to hospital per thousand population has risen from 111 in 1948 to 153 in 1964 -- an increase of 38 per cent in admission rates. It can also be noted that the average length of stay of each general or acute treatment case has remained fairly constant at around 10 days in the period 1948 to 1964. The average length of stay for chronic illness patients fluctuated between 225 and 435 days in the period 1952 to 1964, and for convalescent patients between 37 and 56 days, but these represent a much smaller proportion of the total patient load. As a result of the greater number of admissions and the relatively stable average length of stay, the number of days of hospital care per thousand population has increased in this period. Days of care per thousand rose from 1,318 in 1948 to 1,481 in 1952 and to 1,759 in 1964 -- an increase of about 33 per cent since 1948 and 19 per cent since 1952. It can therefore be concluded that a second factor influencing the increase in the per capita cost of hospital care has been the increase in the rate of admissions to hospital and therefore in the number of days of care provided by hospitals for each thousand people in the population.

TABLE 12

ESTIMATED CHRONIC AND CONVALESCENT HOSPITAL BEDS SET UP,[a] TOTAL AND PER THOUSAND POPULATION, BY PROVINCE, 1948 AND 1964

Province	Total		Per Thousand Population	
	1948	1964	1948	1964
Newfoundland	147	156	0.4	0.3
Prince Edward Island	0	51	.0	0.5
Nova Scotia	26	83	0.1	0.1
New Brunswick	26	188	0.1	0.3
Quebec	2,627	5,676	0.7	1.0
Ontario	2,090	8,466	0.5	1.3
Manitoba	520	1,011	0.7	1.1
Saskatchewan	79	719	0.1	0.8
Alberta	160	2,541	0.2	1.8
British Columbia	1,039[b]	359	1.0	0.2
Northwest Territories	0	67	.0	1.5
Canada	6,714	19,317	0.5	1.0

(a) Includes non-federal public and private hospitals, exclusive of institutions which provide custodial and/or domiciliary care only. In the Territories federal hospital are included.

(b) Includes certain beds in institutions classified as "private hospitals" in 1948 but regarded as nursing homes in 1964.

Sources: "Hospital Care in Canada; Trends and Development 1948-1962", Research and Statistics Division, D.N.H. & W., Ottawa, September, 1964, Appendix Table A21; "Annual Report of the Minister of National Health and Welfare under the Hospital Insurance and Diagnostic Services Act, 1965-66", Appendix Tables A12 and A13.

TABLE 13

SELECTED STATISTICAL INDICES OF HOSPITAL UTILIZATION AND EXPENDITURES IN ACTIVE TREATMENT HOSPITALS,[a] CANADA, 1948 TO 1964

Year	Admissions Per Thousand Population[b]	Average Length of Stay Per Case[b]			Days of Care Per Thousand Population[b]	Operating Expenditures Per Patient Day of Care (b, c)
		General	Chronic	Convalescent		
1948	111	10.0	(d)	(d)	1,318	7.88(est.)
1952	128	10.0	311.5	56.3	1,481	10.94(est.)
1956	140	10.0	434.6	40.5	1,568	14.84
1958	142	9.8	404.3	36.7	1,578	17.84
1959	143	9.8	418.5	42.1	1,624	18.88
1960	145	9.9	327.4	42.1	1,656	21.32
1961	149	10.0	241.2	40.0	1,676	23.10
1962	149	10.1	249.9	38.4	1,704	24.82
1963	151	10.1	267.3	38.9	1,719	26.87
1964	153	10.2	224.6	40.5	1,759	29.18

(a) Excluding private and federal hospitals.
(b) Excluding newborns.
(c) Excludes Northwest Territories and Yukon, 1948-60; excludes Newfoundland, 1948 and 1952.
(d) Information not available.

Sources: "Hospital Care in Canada; Trends and Development 1948-1962", Research and Statistics Division, Department of National Health and Welfare, Ottawa, September 1964, Tables A3, A5, A6; D. B. S., "Hospital Statistics," Vol. I, 1952-64 and Vol. VI, 1964; "Annual Report of the Minister of National Health and Welfare under the Hospital Insurance and Diagnostic Services Act, 1964-65", Tables A2, A5 and A16; "..., 1965-66", Tables A2, A5; and other unpublished data.

The increases in the supply of beds and in utilization rates are not enough, however, to explain the 200 per cent increase in per capita costs since 1953. The actual costs of operating hospitals per patient day of care during this period as Table 13 indicates has increased from $7.88 per day in 1948 to $29.18 per day in 1964 -- an increase of 270 per cent -- or between 1952 and 1964 an increase of 185 per cent. Since 1958, the year national hospital insurance started, the increase has been 64 per cent, an average of just over 10 per cent a year for this six year period. Since wages and salaries constitute about two-thirds of the operating costs of hospitals, it can be concluded that the rise in hospital costs can be largely attributed to the salary increases granted to employees in this traditionally under-paid field, and to a certain extent to the increase in the specialization of hospital activities and the resulting increase in the number of employees required in hospital to provide one day of patient care.

Physicians

The Research and Statistics Directorate of the Department of National Health and Welfare every few years conducts a survey of physicians across Canada to determine their location and the types of practice in which they are engaged. Since 1948 the supply of active civilian physicians in Canada has increased from 13,259 to about 22,650, as shown in Table 14. The largest increase has taken place in British Columbia where the supply of physicians more than doubled in the period 1948-1965. As would be expected, Ontario and Quebec have the largest supply of physicians with about 8,500 in the former and 6,400 in the latter. These figures should be borne in mind when discussing the supply or the costs of medical care in Canada. These figures exclude physicians in the Armed Forces, but include physicians employed in hospitals, education, research, government services, drug houses, life insurance companies and industry. The latter group account for about 17 per cent of the total.

The supply of doctors in each province is related to the population they serve in Table 15. For the whole of Canada the number of people per physician fell slightly from 967 in 1948 to 864 in 1965. Ontario, Quebec and British Columbia naturally have considerable influence in the calculation of these averages. It is estimated that in 1965, whereas in British Columbia there were 733 people for each doctor and in Ontario 791, in Newfoundland there were over 1,500 people for each doctor and in New Brunswick about 1,300. There is some correlation between the figures for personal income per capita in each province and the number of people per physician. British Columbia and Ontario have proportionately the greatest supply of doctors, and in these provinces personal disposable income per capita is highest in the country. Conversely Newfoundland, New Brunswick and Prince Edward Island have the lowest personal disposable incomes per capita, and at the same time have a

TABLE 14

NUMBER OF ACTIVE CIVILIAN PHYSICIANS, BY PROVINCE, SELECTED YEARS 1948 TO 1965

Province	Number of Physicians					
	1948(a)	1951(a)	1954(b)	1959(b)	1962(b)	1965(g)
Newfoundland	(c)	159	188	235	304	331
Prince Edward Island	70	72	82	82	87	88
Nova Scotia	516	555	571	648	735	771
New Brunswick	334	367	381	450	458	481
Quebec	3,723	4,008	4,365	5,446	5,932	6,410
Ontario	5,025	5,260	5,879	7,311	7,826	8,509
Manitoba	745	776	799	972	1,085	1,144
Saskatchewan	619	646	752	900	919	962
Alberta	758	835	988	1,241	1,367	1,485
British Columbia	1,188	1,346	1,630	1,996	2,210	2,441
Yukon & N. W. T.	17	18	16	19	25	27
Total	13,259(d)	14,163(e)	15,651	19,300	21,011(f)	22,649

(a) Count of records of Physicians Register, D. N. H. & W.
(b) Mail questionnaire survey, D. N. H. & W. (1962 as part of survey by Royal Commission on Health Services); data given here includes both response and non-response.
(c) Not available.
(d) Includes 264 thought to be in Canada, but for whom exact location was not known.
(e) Includes 121 thought to be in Canada, but for whom exact location was not known.
(f) Includes 63 thought to be in Canada, but for whom exact location was not known.
(g) Estimated.

Source: Physicians Register, Research and Statistics Directorate, Department of National Health and Welfare.

TABLE 15

POPULATION PER ACTIVE CIVILIAN PHYSICIAN, BY PROVINCE, SELECTED YEARS 1948 TO 1965

Province	Population per Physician[a]					
	1948	1951	1954	1959	1962	1965
Newfoundland	(b)	2,279	2,101	1,864	1,539	1,505
Prince Edward Island	1,329	1,367	1,232	1,232	1,218	1,227
Nova Scotia	1,211	1,158	1,179	1,106	1,008	987
New Brunswick	1,491	1,405	1,417	1,287	1,321	1,295
Quebec	1,017	1,012	1,005	917	902	883
Ontario	851	874	870	811	808	791
Manitoba	1,001	1,001	1,030	912	859	841
Saskatchewan	1,354	1,288	1,161	1,002	1,010	989
Alberta	1,127	1,125	1,070	998	998	977
British Columbia	911	866	794	782	748	733
Yukon & N.W.T.	1,412	1,394	1,688	1,789	1,560	1,481
Canada	967	989	977	900	881	864

(a) Based on Numbers of physicians as shown in Table 13 and Dominion Bureau of Statistics' intercensal estimates of population or Census data (1948, June 1; 1951, Census, June 1; 1954, June 1; 1959, March 1; 1962, April 1; 1965, June 1).

Source: Physicians Register, Research and Statistics Directorate, Department of National Health and Welfare.

shortage of physicians. Only Alberta, Saskatchewan and the Territories are out of place when the provinces are ranked by per capita personal disposable income, as Table 16 shows. It would seem that the supply of medical care in Canada follows the dollar.

The figures shown in Table 5 for expenditures on physicians' services should be related to the supply of physicians in the country. It was noted that the cost of physicians' services more than tripled (208 per cent increase) between 1953 and 1965 -- from $177 million to $545 million. On the other hand the supply of physicians has increased by only 45 per cent in the period 1954 to 1965. As might be expected, therefore, the average gross income of physicians has been steadily increasing. From Table 17 it can be seen that in 1957 average professional earnings amounted to $20,804 per physician, and in 1965 had risen to $32,800. These figures represented gross earnings, out of which physicians have to pay the expenses of carrying on their business. Around 33 per cent of a physician's income from private practice is spent in running that practice. The average net income, therefore, which might be comparable to the salary of an employed person, amounted to $12,852 in 1957 and to $22,000 in 1965.

It is of interest to examine the average income of physicians in each province in 1965. In terms of gross earnings, Prince Edward Island had the lowest average at $25,600, Nova Scotia next at $27,500, and Quebec and New Brunswick averaged $29,000. Newfoundland, British Columbia and Manitoba were under the national average at around $32,000. Ontario and Alberta were well over the national average at $35,000. The highest average gross earnings were made in Saskatchewan at $37,500.

After allowing for practice expenses, average net earnings for Canada in 1965 were $22,000, so that practice expenses accounted for 1/3 of gross earnings. Average net earnings ranged from a low of just under $18,000 in Prince Edward Island to a high of over $24,000 in Ontario, and around $23,000 in Saskatchewan, Newfoundland, and Alberta. The Territories have been ignored in this analysis, since their physician supply is so low as to distort the picture. Compared with the Canadian 1965 average of 33 per cent of gross earnings going for practice expense, Newfoundland doctors averaged 27 per cent, and Manitoba doctors averaged almost 39 per cent.

The 16,400 doctors in private practice who reported taxable incomes for 1965, are distributed by income class in Table 18. Whereas only 2,630 doctors reported net incomes of less than $10,000, over 5,800 (more than twice as many) reported net incomes of over $25,000. About 2,500 doctors reported net incomes between $10,000 and $15,000, over 2,800 reported net incomes between $15,000 and $20,000, and almost 2,700 reported net incomes between $20,000 and $25,000. About 65 per cent of the doctors reported net incomes of less than $25,000 and almost 50 per cent reported incomes between $10,000 and $25,000.

TABLE 16

NUMBER OF ACTIVE FEE-PRACTICE PHYSICIANS PER 10,000 POPULATION AND PERSONAL DISPOSABLE INCOME[a] PER CAPITA, BY PROVINCE, 1965

Province	Physicians per 10,000 Population	Personal Disposable Income per Capita $
British Columbia	10.8	2,064
Ontario	9.4	2,030
Alberta	7.5	1,813
Saskatchewan	7.4	1,809
Manitoba	8.1	1,738
Quebec	7.9	1,578
Nova Scotia	7.4	1,386
Prince Edward Island	6.7	1,315
New Brunswick	5.9	1,283
Newfoundland	3.0	1,104
Yukon & N.W.T.	4.8	1,325
CANADA	8.4	1,788

(a) Consists of total personal income less personal direct taxes.

Source: Data based on Table 13 and D.B.S. publication "National Accounts Income and Expenditure, 1965".

TABLE 17

AVERAGE GROSS AND NET PROFESSIONAL EARNINGS[a] OF ACTIVE FEE-PRACTICE PHYSICIANS, AND AVERAGE PRACTICE EXPENSES AS PERCENTAGES OF AVERAGE GROSS PROFESSIONAL EARNINGS, CANADA, 1957 TO 1965, AND PROVINCES, 1965

Area	Average Gross	Average Net	Expenses as Per Cent of Gross
	$	$	%
Canada 1957	20,804	12,852	38.2
Canada 1958	22,103	13,778	37.7
Canada 1959	22,910	14,590	36.3
Canada 1960	24,288	15,735	35.2
Canada 1961	25,862	16,472	36.3
Canada 1962	26,322	16,970	35.5
Canada 1963	28,690	18,688	34.9
Canada 1964	30,586	20,484	33.0
Canada 1965	32,799	22,064	32.7
	1965	1965	1965
	$	$	%
Newfoundland(b)	31,620	23,028	27.2
Prince Edward Island	25,596	17,835	30.3
Nova Scotia	27,486	19,146	30.3
New Brunswick	29,622	20,251	31.6
Quebec	29,010	20,532	29.2
Ontario	35,752	24,188	32.3
Manitoba	32,037	19,681	38.6
Saskatchewan	37,474	23,530	37.2
Alberta	35,397	22,681	35.9
British Columbia	31,675	20,121	36.5

(a) Professional earnings include fees, and wages and salaries earned incidental to fee practice.

(b) Average earnings figures exclude physicians employed mainly on a salaried basis under the Cottage Hospital Medical Plan.

Source: Unpublished Taxation Statistics, Department of National Revenue, and estimates of numbers of physicians, Department of National Health and Welfare.

TABLE 18

AVERAGE GROSS AND NET PROFESSIONAL EARNINGS OF ACTIVE FEE-PRACTICE PHYSICIANS, AND AVERAGE EXPENSES AS PERCENTAGES OF GROSS PROFESSIONAL EARNINGS, BY INCOME CLASS, CANADA, 1965

Income Class(a)	Average Gross	Average Net	Expenses as Per Cent of Gross	Number of Doctors in Fee-Practice
$	$	$	%	
Under 10,000	12,095	6,503	46.2	2,630
10,000 - 14,999	19,672	12,194	38.0	2,489
15,000 - 19,999	26,929	17,014	36.8	2,848
20,000 - 24,999	32,517	21,726	33.2	2,659
25,000 - 49,999	45,952	32,350	29.6	5,086
50,000 - 99,999	81,235	58,648	27.8	700
100,000 and over	160,352	120,188	25.0	29
All Income Classes	32,799	22,064	32.7	16,441

(a) Income in the context of these classes means income from all sources, including wages and salaries incidental to fee practice, and net proceeds from investments and other nonprofessional activities, but excluding expenses of professional fee practice.

Source: Unpublished Taxation Statistics, Department of National Revenue, and estimates of numbers of physicians, Department of National Health and Welfare.

International Comparison

Before leaving the question of health resources, it may be helpful to see Canada's resources in perspective when compared with other countries. From Table 19, based on WHO statistics, it can be seen that Canada ranks high among the major industrial nations of the world in its supply of hospital beds -- only Sweden and Switzerland have a proportionately greater supply -- but Canada ranks far down the list in its supply of physicians -- of the 17 nations listed here, Canada ranks fourteenth. Note that United States has 690 people per doctor compared with 890 in Canada and 840 in England. On the other hand Canada has 90 people for each hospital bed compared with 110 in the United States and 115 in England.

PROGRAMS

So far this paper has been concerned with the costs of health care services and the availability of resources. It is appropriate now to consider the various public programs that have been introduced over a period of many years in order to improve the allocation of health services to various segments of our population. These programs can be very roughly divided into two categories: programs providing personal health care services and those providing public health services.

Personal Health Care Programs

Federal

Personal health care programs have been introduced at various levels of government. The federal government has accepted responsibility for providing hospital, medical and other health care services, by employing physicians and building hospitals, to members of the Armed Forces, to recipients of Veterans' Allowances and to several other categories of veterans, to Indians and Eskimos, and, through cost-sharing agreements with the provinces, to immigrants during their first year of residence in Canada.

Provincial

The development of health care services in Canada has varied among the provinces according to their own traditions. For example, in the Province of Quebec, traditionally, religious organizations have provided hospital care on a charitable basis to needy persons in the province. In most of the English-speaking provinces the care of needy persons in each municipality was the responsibility of the municipal

TABLE 19

POPULATION PER PHYSICIAN[a]
AND PER HOSPITAL BED[b]
SELECTED COUNTRIES,
1962 OR 1963

Country	Year	Population per Physician	Year	Population Per Hospital Bed
Israel	1963	430	1963	160
U.S.S.R.	1963	510	1963	110
Italy	1961	610	1961	110
W. Germany	1963	650	1962	100
Argentina	1962	670	1962	150
New Zealand	1963	680	1964	90
United States	1963	690	1963	110
Australia	1963	730	1962	90
Switzerland	1963	760	1960	80
Denmark	1963	760	1962	110
England & Wales	1963	840	1963	115
France	1963	870	1962	110
Netherlands	1963	880	1962	130
CANADA	1962	890	1962	90
Norway	1962	890	1962	100
Japan	1962	920	1962	100
Sweden	1963	960	1962	70

(a) All graduate physicians, practitioners and non-practitioners.

(b) In all types of hospitals - government, non-profit, and profit institutions, general, special, mental, tuberculosis, and cottage hospitals.

Source: World Health Statistics Annual 1962, Vol. III, Health Personnel and Hospital Establishment; W.H.O., Geneva; 1966; Tables 1.1 and 2.1.

authorities. In some municipalities, municipal hospitals were constructed which cared for needy residents of the municipality without charge. In others, the cost of hospital care for needy persons in local hospitals was paid by the municipality. In practically every province, physicians have traditionally cared for needy persons without charge.

Following the depression years of the thirties, provincial governments have taken on a greater responsibility for the health care of indigent persons within each province. In some cases, provinces made grants to hospitals to cover the costs of providing care for indigents, and grants were also made to hospitals to help them with their deficits. With the introduction of public assistance programs to provide incomes to persons who would submit to a means test, several provinces developed schemes to provide medical and hospital care to recipients of assistance payments. Prior to 1966 in six provinces certain categories of assistance recipients have been entitled to free health care financed by provincial governments. In British Columbia, Alberta, Saskatchewan, Manitoba and Nova Scotia, the benefits available to such persons included physicians' services in home, office and hospital. In Ontario certain categories of assistance recipients were entitled to free medical care in the home or office, but not in hospital; in this province hospitals were expected to continue to provide free medical care to indigent patients. A seventh province, Newfoundland, has a fairly extensive program which provides hospital and medical care to residents of the "out-ports" and to indigent residents of the City of St. John's.

Of course, with the introduction of hospital insurance, the provisions for hospital care under these programs underwent certain changes. In those provinces requiring premiums, the provincial schemes will pay either the premiums or the costs of care for assistance recipients. In a province without a premium system, assistance recipients are entitled to hospital care like all other residents of the province.

As of April 1, 1966 under the Canada Assistance Plan, the federal government will share in one-half the cost of those provincial assistance programs that provide assistance to people who are in need -- that is, to those applicants who meet a test of need. In the assessment of the needs of such people, their expenditures on personal health care services, or on premiums for medical care insurance, will be taken into account. Because of these provisions, some provinces have found it feasible to enlarge their existing health care programs, and others which were without health care benefits have introduced them.

Mention should also be made of the fact that free care in mental and tuberculosis hospitals is provided in most of the provinces, financed largely by the provincial governments. In all provinces workmen injured on the job are entitled to medical aid, hospital care, rehabilitation services, and cash allowances during absence from work, under the provincial Workmen's Compensation Acts. These programs are financed solely by premiums levied against each employer in the industries covered by the Acts.

Health Insurance

The Royal Commission on Dominion-Provincial Relations in 1940 made certain recommendations regarding the introduction of health insurance in Canada, which were never implemented. This was followed in 1943 by the report of the Advisory Committee on Health Insurance which submitted to the Cabinet a draft health insurance bill. A special committee on Social Security of the House of Commons agreed in principle to the provisions of this bill, and the following year recommended that the bill be referred to a Dominion-Provincial Conference. At the Dominion-Provincial Conference in August 1945, the federal government made two proposals to the provinces in the field of health. The first was to make financial contributions toward the operation of provincial health insurance programs, and the second was to provide a series of grants to each province to assist in the planning and development of health insurance, the construction of hospitals, and the expansion of public health services. These proposals were not accepted by the provinces because they could not agree to the other arrangements required by the federal government. In 1948, however, the federal government decided to implement its second proposal regarding conditional grants to the provinces as the first step towards the introduction of nation-wide health insurance. Such grants have been paid continuously since 1948 to the provinces, and hospital insurance commenced in Canada on a nation-wide basis in 1958.

As of January 1, 1961, hospital care insurance was available to all residents of Canada, including the Territories. Five provinces introduced such plans on July 1, 1958 or earlier, two provinces on January 1, 1959, two provinces during 1959, two Territories during 1960, and Quebec was the last province to introduce a program, commencing in 1961. By March 1966, 19.7 million Canadians were covered under these provincial hospital insurance programs, representing 99.3 per cent of the eligible population. In 1963, the latest year for which final payments data are available, the insurance programs met about $750 million of the $900 million costs of operating public hospitals shown in Table 5.

In some of the western provinces, municipalities have for many years contracted with doctors to provide medical care to municipal residents on a salary basis. Several municipalities in the Swift Current Region of Saskatchewan banded together in 1946 to adopt a medical care insurance scheme for all residents of this Region. The program was financed by premiums and property taxes and the doctors were paid on a fee-for-service basis. The Province of Saskatchewan introduced a medical care insurance program in July 1962, covering all residents of the province. This plan eliminated the "municipal doctor" arrangements in that province, but plans were worked out for the continuation of the Swift Current program within the larger provincial scheme.

Every person who has resided in the Province of Saskatchewan for three months and has paid the small premium (it is $24 per year for a family) is entitled to have payment made on his behalf from the Medical Care Insurance Fund, for medical, surgical and obstetrical care, without limit, in the office, home or hospital, from his physician of choice. This includes payment at specialists' rates for referred specialists' services. Out-of-province benefits are also paid, according to the fees effective in Saskatchewan. There are no restrictions relating to age or pre-existing conditions, or other factors. Physicians providing insured medical services may elect to receive payment in a number of ways: (1) they may contract for a salary or similar arrangement; (2) they may choose to receive direct payment from the Medical Care Insurance Commission at 85 per cent of the fee schedule of the College of Physicians and Surgeons of Saskatchewan as payment in full; (3) they may bill their patients directly, at whatever fee they wish to charge, and the patient in turn will be paid by the Commission, on presentation of an itemized bill or receipt, an amount equal to 85 per cent of the scheduled fee; (4) the physician may practise for private fees, whereby the patient assumes all responsibility for payment of the doctor's fee without any claim on the Commission. In addition, patients may enrol, voluntarily, with an approved health agency upon payment of a fee to cover administration costs. In this case the physician (if he also is a member of the agency) will bill the agency directly, and the agency will pay him the amount it receives from the Commission in respect of the physician's assessed account. As a member, the physician is obliged to accept the 85 per cent as payment in full.

Alberta introduced in 1963 a medical care insurance program featuring voluntary enrolment in commercial and non-profit plans. The government is involved financially only to the extent of subsidizing part of the cost of premiums (up to 80 per cent) for those who cannot afford the full rates charged by the private agencies. The government

specifies (a) conditions for coverage[1], (b) minimum levels of benefits[2], and (c) maximum levels of premiums[3]. A supplementary program was added in 1966 providing for many additional health services, including prescribed drugs, optometry, physiotherapy, psychology, ambulance, osteopathy, chiropractic, podiatry, naturopathy, and various medical supplies and appliances.

In Ontario in July 1966 a voluntary plan similar in some respects to the plan in Alberta began to provide medical care benefits. The British Columbia government has also introduced a partially subsidized voluntary medical care plan. The Ontario and British Columbia plans, however, differ from that of Alberta in several important respects: (a) the subsidies on premiums are, so far, somewhat more liberal; (b) welfare cases receiving income maintenance allowances on a needs test are included by the government undertaking to pay the required premium on their behalf (in Alberta the medical program for welfare recipients is separately administered); and (c) administration is by a single government-appointed and -controlled insurance carrier[4]; only in Alberta are commercial plans and non-profit doctor-sponsored plans permitted to offer policies as part of the program .

Since July 1966 in Alberta, for subscribers reporting no taxable income for the previous year, the government has contributed 80 per cent toward the cost of premiums; for persons with taxable income from $1 to $500 the government subsidy is 50 per cent of premiums, and 25 per cent for persons with taxable income from $501 to $1,000.

The British Columbia program, which came into effect in September 1965, subsidizes premiums for families with taxable incomes of $1,000 a year or less. Maximum premiums to be paid (for those not eligible for subsidy) were set at $60 for a single person, $120 for a family of two, and

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(1) Policies must be available, and non-cancellable by the insurer, for all.
(2) These must be of a type at least as comprehensive as the group plans offered at present by non-profit plans.
(3) These in 1963, 1964, 1965 and 1966 could not exceed $159 per year for a family of three or more persons, $126 for a family of two, and $63 for a single subscriber.
(4) The B.C. program is administered by a six-member board appointed by the government, three of whom are nominated by the Provincial Secretary and three members by the B.C. Medical Association. The member designated president by the government has a second deciding vote in case of a tied vote. In Ontario administration is by the Medical Services Insurance Division of the Department of Health, with the Medical Services Insurance Council acting as advisor to the Minister of Health and composed of 5 representatives of the public and two of the medical profession.

$150 for a family of three or more. Since April 1, 1966 subsidies have been 90 per cent for persons with no taxable income, and 50 per cent for persons with taxable income from $1 to $1,000.

In the Ontario program the premiums are the same as in British Columbia. No premium payment is required of families with no taxable income. For a single person with an income of $1 to $500, or for a family of two with $1 to $1,000, the subsidy is 50 per cent. Families of three or more will be subsidized 60 per cent (or $90 of their $150 premium), if their taxable income was $1 to $1,300 in the previous year.

At the federal level, a Royal Commission on Health Services examined the whole question of health services in Canada, including the problem of medical care insurance. In the recommendations contained in its 1964 report, it proposed a national health plan covering the entire population for a comprehensive range of health benefits, to be financed out of general taxation funds and administered by the provinces.

The following year, in July 1965, the federal government set forth four principles on which it was prepared to assist provinces in establishing medical care insurance plans. The federal government proposed that it contribute per capita grants to any province undertaking a physicians' services insurance program that satisfies four requirements: (1) portability of coverage and benefits, (2) public accountability in administration, (3) comprehensive physicians' services -- that is, all services that physicians render, --- and (4) universal coverage of the eligible population. The per capita grants would be set at a level equal to one-half of the national per-beneficiary cost. In December 1966 the Medical Care Insurance Act was passed, embodying these principles. Federal payments will commence by July 1, 1968 at the latest.

At the moment, several provinces have indicated their intention to establish programs that incorporate the four federal principles. The proposal is being actively considered by the remaining provinces.

Public Health Service Programs

The support of public health services in Canada at the federal level can be said to have commenced in 1919 with the establishment of a health ministry and the introduction of a federal grant for the control of V. D. This grant continued from 1919 until 1933, and from 1937 until 1960, and set the pattern for other federal health grants to the provinces for specific health purposes.

National Health Grants

A series of national health grants was introduced in 1948, designed to assist the provinces in improving particular health services or in constructing hospitals; these were continued each year to 1960. In 1953, three additional grants were added to the program. In 1960, the grants for V.D. control, crippled children and laboratory and radiological services were discontinued by including these grants under the general public health or the medical rehabilitation grants. In that year twelve grants were reduced to nine, and both the training and the research grants were tripled to consolidate expenditures on training and research projects under these two grants. The hospital construction grant is by far the largest, with $21.5 million spent by the federal government in 1964-65 and $17.6 million in the last fiscal year. It should be mentioned that in 1965-66 Quebec took advantage of the Established Programs (Interim Arrangements) Act which allowed it to receive about $9\frac{1}{2}$ million as a tax adjustment rather than in the form of specific health grants.

During the first 18 years of the National Health Grants program, although $840 million was made available, only $663 million was actually spent. The program has grown from expenditures of $7\frac{1}{2}$ million in 1948 when they were introduced, to $55 million in the fiscal year 1965-66, including Quebec's tax adjustment.

National Health Resources Fund

In 1966 the federal government set up the Health Resources Fund, making available to the provinces $500,000,000 over the next 15 years to help them provide more health training facilities and research institutions. This money can be used for planning, designing, constructing or renovating buildings to be used as health training facilities, and for necessary basic equipment. The sum of $300,000,000 is available to the provinces on a per capita basis, but no more than half the cost of any project can be met from this source. Another $25 million, not restricted in this way, is available to the Atlantic Provinces on the basis of joint submissions by them. The remaining $175 million is to be allocated to projects in the provinces by the federal government, on the advice of the Health Resources Advisory Committee. To qualify a project must be part of a five year program for developing health training facilities in the province which has been approved by the Advisory Committee.

Already several projects have been supported under this new Act, and it is expected that many more will be initiated if the provinces are to ensure that they will have available adequate health personnel in future to meet the everincreasing demands of their people for health services that can be anticipated under the new medical care insurance programs soon to come into operation across Canada.

Provincial Public Health Programs

As noted in Table 10, the provincial governments spent about $70 million on public health services in 1965-66. As these governments have the major responsibility for public health services in Canada, their individual programs are far too numerous to describe in this paper. A comprehensive description will be found in Provincial Health Services: By Province, which is Memorandum No. 20 in the Health Care Series published by the Research and Statistics Directorate in November 1966. Up-to-date information can be found each year in the Canada Year Book chapter on health and welfare.

INTERNATIONALLY - COMPARABLE[a] GROSS NATIONAL PRODUCTS AT CURRENT MARKET PRICES, SELECTED COUNTRIES, 1953-1965

(used for Tables 4 and 8)

Year	Canada	United States	New Zealand	United Kingdom	Norway
	$ millions	$ billions	£ millions	£ millions	millions Kr.
1953	25,003	369.7	840	17,080	20,874
1954	24,852	370.1	930	18,016	22,581
1955	27,108	403.7	983	19,247	23,995
1956	30,571	425.2	1,031	20,885	27,090
1957	31,885	447.9	1,092	22,071	28,788
1958	32,906	455.0	1,135	23,024	28,658
1959	34,909	491.2	1,217	24,197	30,417
1960	36,281	511.4	1,311	25,660	32,340
1961	37,435	528.6	1,361	27,378	35,241
1962	40,520	569.1	1,462	28,690	37,867
1963	43,142	598.4	1,605	30,471	40,252
1964	46,963	638.8	1,756	32,847	44,667
1965[b]	51,689	687.0	..	34,866	..

(a) As established by the United Nations.

(b) Estimated by multiplying the 1965 Gross National Product, as determined by each country, by the ratio of the sum of its Gross National Products for 1962, 1963, and 1964, as determined by the United Nations, to the sum of its Gross National Products for 1962, 1963 and 1964, as determined by each country. United Nations data for 1965 not expected before July 1967. Estimates not made for New Zealand and Norway because personal health care expenditures data for 1965 not available for them. The ratio used for Canada was .9940868, for the United States 1.0158024, and for the United Kingdom 1.1282126.

Sources: United Nations, "Yearbook of National Accounts Statistics 1965", New York, 1966; Dominion Bureau of Statistics, "National Accounts Income and Expenditure, 1947-61", Ottawa; ibid, 1965; "Statistical Abstract of the United States, 1966", Washington, 1966, p. 321; "Statistical Abstract of the United Kingdom, 1966", London, 1966, p. 252.